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Flooding and media storms - controversies over farming and upland land-use in the UK.

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Abstract

This viewpoint considers the impacts of media coverage of last winter's flooding upon the farming community and the implications for their role as key partners in the delivery of landscape changes necessary to address flooding. The paper focuses on the experiences of the Pontbren farmers in Mid Wales, whose land is the site of a much-referenced study on the benefits of tree planting to address flood risk. It is argued that media sensationalism, and in many instances conflation of the science around this issue, has served to undermine good-will and engagement from farmers. Consequently, this viewpoint emphasises the importance of highlighting synergies as starting points for dialogue; as is the case when negotiating all forms of landscape multifunctionality.

Last winter's extreme weather has once again prioritised questions of flood remediation and resilient land-use amongst policy makers and affected communities. December 2015 was reported as the wettest month on record (Met Office 2015), coming only a year after earlier 'record breaking' floods affected many communities in the UK (Met Office and CEH 2014). Whilst controversy over responsibility has affected all actors across the catchment system, including those at the level of national government (see e.g. Shukman 2015), a notable emphasis has been placed on the question of upstream land-use. George Monbiot has been one of the most prolific and vocal commentators, writing in a range of media outlets from the Mail

Online to the Guardian and Twitter (2013; 2014; 2015a,b; 2016), targeting his critique at upland sheep farming:

“...money devoted to freshwater flood relief is being spent at the bottom of river catchments...A rational policy would address the problem upstream. A study in mid-Wales suggests that rainwater’s infiltration rate into the soil is 67 times higher under trees than under sheep pasture... But Cumbria’s hills are almost entirely treeless, and taxpayers, through the subsidy regime, pay farmers to keep them that way.” (2015a)

More venomously, he has described the British uplands as ‘*sheepwrecked*’ contending that:

“...we pay billions to service a national obsession with sheep, in return for which the woolly maggots kindly trash the countryside. The white plague has done more extensive environmental damage than all the building that has ever taken place here ...Upland grazing, in other words, contributes to a cycle of flood and drought.” (2013)

Whilst others have been less provocative in their coverage of these issues, there have been numerous aligned claims for the benefits of tree planting in the uplands, including arguments presented by the technical director of Confor¹ in the Scotsman on January 26th 2016; on the BBC’s nature programme Winter Watch on 28th January; and by the Minister for floods Rory Stewart (see Lean 2016).

This *viewpoint* considers the impacts of such media coverage upon the farming community, as key partners in the delivery of landscape changes necessary to address flooding. Specifically, it is argued that media sensationalism, and in many instances conflation of the science around this issue, has served to undermine good-will and engagement from farmers. This includes

¹ Federation of Forest Industries <http://www.confor.org.uk/> [last accessed 18/5/16]

those involved with the flagship Pontbren Project,² which Monbiot (2014) and others have applauded. Pontbren is also referred to as the site of the study in the above quote from Monbiot (2015a) and data from research conducted there (e.g. Carroll et al. 2004; Marshall et al 2009, 2014) has similarly been cited by other recent media publications on flooding and tree planting.

Whilst such coverage has not been evident across the full spectrum of media outlets, it has been clearly noted in the farming press. This has resulted in continued backlash against what is perceived as an attack on the farming way of life (see e.g. Davies 2015 and Driver 2015). Productive dialogues are not, therefore, seen to be forthcoming. But, as this paper argues, they are much needed if progress is to be made. Given that a range of actors are now involving themselves in strategies for upland land use to mitigate flooding,³ it is pertinent to take stock of the issues encountered and the effects of coverage so far.

This *viewpoint* has been informed by a review of the existing natural science evidence-base on trees and flooding, by researchers on the Multi-Land project at Bangor University (Ford et al. 2016), and social science research on farmers' responses to tree planting and land-use change (e.g. Walker-Springett and Parkhill 2014; Wynne-Jones 2013a,b). In particular, insights from the Pontbren farmers are presented here from interviews undertaken with the farmers in 2013 (see WRO 2014 for further details), and informal discussions (i.e. not involving recorded interviews) with the group's leader and spokesperson, Roger Jukes, in January 2016.

² Pontbren is a farmer led initiative which resulted in the planting of 120,000 trees and 16.5km of hedges across 1000ha's in the uplands of Mid Wales. See

<http://www.coedcymru.org.uk/images/user/5472%20Pontbren%20CS%20v12.pdf> [last accessed 18/5/16]

³ For example conservation NGO's such as the Woodland Trust

<https://www.woodlandtrust.org.uk/blogs/woodland-trust/2015/12/flooding-progress-report-1/>, and Rewilding Britain

<http://www.rewildingbritain.org.uk/assets/uploads/files/publications/Rewilding%20and%20Flood%20Risk%20Management%20briefing.pdf> ;

along with research partnerships including Multi-Land funded by Welsh Government with researchers from Bangor University, Centre for Ecology and Hydrology (CEH) and Aberystwyth University <http://www.nrn-lcee.ac.uk/multi-land/> [last accessed 18/5/16]

The centre-point of the argument presented is that the environmental benefits documented by researchers in the Pontbren catchment would not have been possible without the instigating role of the farmers to enable tree planting in the first instance. Subsequently, the farmers have been strong advocates of the land-use changes undertaken, hosting a wide range of visitors and supporting further research and publications, but they are now concerned that the messages reported in the press do not accurately capture their motivations and alienates both them and the wider farming community (personal communication Jan 2016).

The farmers came together as a group of ten in 2001, after earlier experimentation with hedgerow restoration on three neighbouring farms, and sought funding through the National Lottery to scale-up their aspirations for tree-planting. They were supported throughout this process by staff from Coed Cymru⁴ but the project was primarily farmer-led to meet their needs. From the outset, they asserted that tree planting should be undertaken as a means to provide shelter for livestock, as part of a broader shift to enable more resilient farming systems. The benefits to catchment hydrology were only realised subsequently and were not their initial motivation. The farmers are at pains to stress that the project was not singularly intended to produce ‘environmental’ benefits. In their own terms, the initial motivation was *‘to get off the production treadmill’* by returning to more traditional methods of farming, which included replanting hedges as shelter.

Even prior to the recent flooding, the need to engage farmers with tree planting had been highlighted as part of a more multifunctional, ecosystem service led approach to land-use and

⁴ <http://www.coedcymru.org.uk/> [last accessed 18/5/16]

associated business planning (IWA 2012). However, there have been difficulties. For example, within Wales only 13% of uptake on the Forestry Commission's Better Woods for Wales planting scheme came from farmers. In explanation, cultural factors are highlighted as major barrier to engagement (Walker-Springett and Parkhill 2014; Wynne-Jones 2013a). Specifically, a wide base of research has highlighted that farmers' identity as food producers is an important cultural norm which needs to be taken into account when trying to facilitate farm business change (Burton 2004, Burton et al. 2008; Sutherland and Darnhofer 2012; Wynne-Jones 2013b). The Pontbren farmers appear no different, and their ability to communicate the success of their project has been on the basis of maintaining their status as 'good farmers' conforming to such parameters.

The tree planting work at Pontbren resulted in a 5% change in land-use. This has worked in synergy with the farmers' aims to maintain productive livestock businesses. Whilst precise economic comparators are not feasible with national level farm business statistics, it is evident that the land use changes undertaken through the Pontbren project have not compromised the financial viability of the farms (WRO 2014). To the farmers' minds, recent media coverage has not sufficiently acknowledged the careful balance of this land-sharing approach, and they perceive that their story is being used as a means to advocate landscape transformations which do not offer such synergies i.e. a more wide-spread reforestation of the uplands and removal of livestock farming (personal communication Jan 2016).

"Some of those people are quite...they are on their own wave with planting trees... I think it needs to be thought out and what is good for the farm, what is good for the countryside and you know... I was told by a farmer at the market that 'you lot have got us into trouble' ... we

provided years of feedback but we don't want it to be twisted the way it has been twisted."

(Interview June 2013)

"We're having trouble with various bodies... They tried to use Pontbren for their own ends as an advertising tool for propaganda for planting trees and things. And to us and it's really annoying... I'm not happy about it... Hijacked. You know farmers up here read that [showing the interviewer an article that is perceived as 'misinformation' about Pontbren] and they think what bloody planet are [the Pontbren farmers] on? You know and I get a lot of that." (Interview June 2013)

Critically, Monbiot (2014) *has* acknowledged the nuances of the Pontbren farmers' land-use and the rationale behind their decision making. He also attempts to make it clear that his recent outpourings are not intended to blame farmers, but the subsidy system that incentivises their behaviour (2015b, 2016). However, this subtlety appears to have been lost in the resulting tabloid and social media storm (see Driver 2015). The issue Monbiot tries to raise is with the Common Agricultural Policy (CAP) Basic Payment Scheme (BPS) which requires farmers to keep the land clear of scrub and trees. Whilst there are other payments schemes available to promote tree planting (through the Welsh Glastir and English Countryside Stewardship schemes), these are now contradicted by the BPS stipulations.⁵ The future of all these payments is now completely uncertain in the wake of the UK Brexit vote. However, the continuation of such subsidies has long been uncertain, potentially jeopardising the whole future of upland livestock farming here. Whilst this point has been used to add further weight to the argument

⁵ Land covered by scrub or trees is now excluded from the area which is eligible for the BPS. There are concessions available through the government tree-planting schemes so farmers are not immediately penalised on their BPS, but it is not clear what the situation would be after the planting schemes end.

against sheep-farming (Monbiot 2013), this is clearly exacerbating tensions and not supporting any productive discussion.

Reflecting on the role payment-schemes play, it is useful to note research on farmers' decision making that suggests financial incentives are not their only influencing factor. Alongside the cultural pressures noted above, temporal and lifecycle factors further inform the pathways farmers' choose (Ingram et al. 2012; Sutherland et al 2012; Wynne-Jones 2013b). So whilst it is important to remove the contradictory financial incentives in the current scheme portfolio, something which is potentially now much easier without the need to attend to European regulatory architecture, it is equally critical to assess how policy and media messages connect with farmers' identities, aspirations and lifeworlds. These are key points to take into consideration for our post-Brexit land-use policy.

Finally, it is important to reflect on how the Pontbren farmers have engaged with the science. The project was marked by a productive relationship between the farmers and a team of researchers from the Flood Risk Management Research Consortium, with regular information sharing and social exchanges. The farmers demonstrate clear engagement and learning from these interactions, but remained cautious about the potential of their project as a complete solution to the challenges of flooding. In particular, they highlighted that whatever they did on their land would have to work alongside wider management changes downstream (WRO 2014).

Recent media publications have relied heavily on the research undertaken at Pontbren, which showed that surface run-off was reduced following the tree planting there with soil water infiltration rates up to 67 times greater in fenced-off land under trees than in adjacent pasture (Carroll et al. 2004; Marshall et al 2009, 2014). However, as Ford et al. (2016) outline, some

commentators have then extrapolated too far from these results leading to broad-brush media reporting. They argue that further investigations are needed into “the impact of soil properties, land drainage, landscape topography, differences between tree species and to distinguish the effects of trees from the exclusion of livestock by fencing” (ibid p27).

Misrepresentation of the science has frustrated and estranged the farmers from the positive work done through their project. Whilst they are currently trying to ‘set the record straight’ through their own media engagements (personal communication Jan 2016), negative experience could undermine their ongoing role as ambassadors and co-producers in scientific work. It is also important to note that farmers (and the public more broadly) do not automatically trust scientific expertise, particularly as we enter more risky, uncertain futures (Jasanoff 2003). For instance, the following quote from Robert Milton (2016) of the NFU demonstrates the contested nature of these understandings: *“It is after all inconceivable to me that sheep can be directly and solely responsible for flooding, especially when surveys show that their numbers are down by 20-30% over the last 20 years.”*

The perceived credibility of science cannot therefore simply be assumed, but needs to be considered carefully as a socially negotiated process (Wynne 1992). Moreover, the esteemed position of ‘experts’ can no longer be taken for granted as communication becomes an increasingly open – if not necessarily democratic – forum, through online platforms and social media. This is to the extent that notions of a ‘post-factual age’ are now gaining increasing traction (Hubbard 2014).⁶ Comparable media storms over the use of fire as an upland management tool (Davies et al. 2016) demonstrate how powerful the role of commentators can

⁶ See for example:

<http://www.newyorker.com/magazine/2016/03/21/the-internet-of-us-and-the-end-of-facts>
https://www.washingtonpost.com/world/europe/9-out-of-10-experts-agree-britain-doesnt-trust-the-experts-on-brex/2016/06/21/2ccc134a-34a6-11e6-ab9d-1da2b0f24f93_story.html [last accessed 3/8/16]

be, and how capable they are of steering public responses. This is important, because there is a lot of learning and dialogue that still needs to occur between scientists and the farming community on the issue of ongoing environmental change and the best ways to ensure resilience. But in the digitally connected age scientists and land managers will need to take a more proactive and considered approach to communicating research findings and good practise.

Conclusions

Overall this *viewpoint* asserts the need for productive engagement on the issue of flooding and upland land use, rather than alienating key stakeholders through sweeping media rhetoric. The experience of the Pontbren farmers suggests that their goodwill and role as advocates for tree planting has been severely tested. This *viewpoint* emphasises the importance of highlighting synergies as starting points for dialogue; as is the case when negotiating all forms of landscape multifunctionality. We are in a period of flux with a lot of uncertainty around the future viability of upland farming, particularly so after the UK's Brexit vote. But there are opportunities for tree planting to work *with* farming practise, providing a usable working landscape of shelter belts and habitats that don't compromise livestock production, whilst also reducing run-off.

The existing land-use science on flooding and trees is very encouraging but needs to be treated with care and it is both unhelpful and inaccurate to push for radical transformation based on limited data. It would appear, for the moment, that tree planting is part of the solution but not a complete answer to flooding. From a social science perspective, cultural norms have usefully informed the design of agri-environment schemes and similar incentives to date, it is important to build on these lessons in tackling emerging challenges. A final key point is that whilst

scientists and land-use managers cannot control wider media debates, we should at least be more alert to the impact such forums can have and the portrayal of research findings and key stakeholders there-in.

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